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The Public Sector in the Caribbean

Issues and Reform Options

Vinaya Swaroop

Inefficient operations in the public sectors of Caribbean countries cannot be sustained. The private sector must accelerate its role in providing social and infrastructure services. The public sector must be more narrowly focused to help the poor get basic services and to facilitate private-sector-led economic growth.

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Summary findings

The public sector's performance in the Caribbean varies, in reducing poverty and in creating an enabling environment for growth. Barbados and the Bahamas have been the high performers, Guyana and the Dominican Republic have been sluggish, and the other Caribbean countries fall in between.

In the Caribbean region, the public sector is now the predominant provider of tertiary education and health services (university education and hospital-based curative care), which mainly benefit the nonpoor. Attempts must be made to recover costs from high-income users and use that revenue to improve the quality and quantity (as appropriate) of basic services.

Lessons from experience suggest that most Caribbean countries need to encourage the private sector to participate more in providing infrastructure and need to provide a better regulatory framework. The good news: this is already taking place in many countries.

This paper — a product of the Public Economics Division, Policy Research Department — is part of a larger effort in the department to analyze the role of state in developing countries. Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cynthia Bernardo, room N10-055, telephone 202-473-1148, fax 202-522-1154, Internet address prdpe@worldbank.org. May 1996. (28 pages)

Public Sector in the Caribbean: Contemporary Issues and Reform Options

by

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1. Introduction

Governments undertake expenditures to pursue a variety of goals. Among these, two oft-stated public goals are: Poverty alleviation and help create an enabling environment within which the private sector can be the engine of growth. These objectives are a part of the three major functions -- allocation, distribution and stabilization -- of the public budget policy outlined by Musgrave and Musgrave (1989). Access to and provision of basic levels of education (primary and secondary) and preventive health-care services -- particularly if they are concentrated in rural areas -- have been recognized as central to increasing the welfare of the poor.[1] Moreover, educational attainment at basic levels and low infant mortality rates have been shown to have a positive effect on economic growth.[2] The enabling environment consists of, among other things, provision of an adequate, properly regulated, well-maintained and efficient infrastructure of airports, roads and ports, electricity, telecommunications, water, waste disposal and other similar facilities. Electricity and water are essential inputs in the production process; good transport and communication services are critical in enhancing the mobility of goods and services, and sanitary services are needed for waste disposal.

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[1] The link between human resources and social indicators of welfare of the poor has been the subject of a large number of studies. For example, in a benefit incidence study of various components of government spending in five Latin American and the Caribbean countries (Argentina, Costa Rica, Chile, the Dominican Republic, Uruguay), Petrei (1987) found that basic services such as primary education and most public health interventions were strongly pro-poor. Using data on health outcomes and poverty measures for 35 developing countries, Bidani and Ravallion (1995) have shown that differences in public spending on basic education and health tend to matter more to the poor.

[2] Examining the growth rates in 116 economies from 1965 to 1985, Barro and Lee (1993) found secondary school education and low infant mortality rates beneficial for growth. In a study (see World Bank, 1993) of high-performing Asian economies -- Japan, Hong Kong, the Republic of Korea, Singapore, Taiwan (China), Indonesia, Malaysia and Thailand -- primary education measured by school enrollment was found to be by far the largest single contributor to the predicted growth rate.

The objective of this paper is to analyze how effective the Caribbean[3] governments have been in achieving the goals of poverty reduction and the creation of an enabling environment for growth. To examine this issue the paper addresses three main questions: What has been the role of government in the provision of social and infrastructure services in the Caribbean? What have been the economic and social consequences of under-provision of these services? How has the size of public sector varied in the Caribbean region? The last section of the paper draws some lessons from experience and briefly discusses an agenda of public sector reform in the Caribbean countries.

2. The size of the public sector and employment policies

In terms of population as a measure of size, Caribbean countries are relatively small. In mid-year 1992, the 14 countries surveyed for this paper together had a population of roughly 14 million (excluding Haiti), with the Dominican Republic being the largest -- 7.5 million -- and the twin islands of St. Kitts-Nevis the smallest -- just over 40,000 people. Only four countries in the region -- the Dominican Republic, Haiti, Jamaica, and Trinidad and Tobago -- have a population over a million.

The size of the public sector in the Caribbean is large, especially in the Organization of Eastern Caribbean States (OECS).[4] In most cases this is by choice rather than due to any economic constraint. For example, in Guyana, until very recently, private provision of education and health was

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[3]In this paper, the term 'Caribbean' refers to the Caribbean Group for Cooperation in Economic Development (CGCED) countries. These countries are: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname, and Trinidad and Tobago. Due to the recent political and economic turmoil and the inability to get information, Haiti is not included in the sample. Besides Haiti, Guyana and the Bahamas all economies in the CGCED group are classified as Middle-income (see World Bank, 1994a). Economies of Haiti and Guyana are listed as Low-income and that of the Bahamas as High-income.

[4]The Organization of Eastern Caribbean States are eight in number and include Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts-Nevis, St. Lucia, St. Vincent and the Grenadines.

prohibited by law and no cost-recovery measures were permitted. In many small industrialized economies (e.g., Denmark, Luxembourg, New Zealand, Switzerland) the public sector is also large but it is mainly due to their social transfer policies.

The typical public sector in the Caribbean region can be characterized as follows: The public sector is large, its service provision remains unfocused and is generally inefficient. Public sector employment is larger than the need and the wage bill continues to be the most dominant non-discretionary item in government budgets. The public sector has been the employer of last resort with a legacy of major over-staffing at lower levels. It is rare to find workers at technical and managerial levels getting paid well in comparison to the private sector. As a result, it is difficult to attract skilled people into the public service and even more difficult to retain the existing ones. The overall impact of such employment practices is that the public sector lacks one of the most important tools, namely the requisite human resource skill-mix, to implement and enforce public policies in a desirable way.

A measure of the size of the public sector -- the share of national income (GDP) consumed by the central government -- in the Caribbean countries is given in Table 1. The last three rows of the table support the hypothesis that the size of government increases with a country's income though the composition of public spending changes too. The share of public spending in GDP is large in industrialized countries largely due to their social transfer policies. Levels of public spending in many Caribbean countries are closer to industrialized countries rather than developing countries. Industrialized countries on average spend close to 40 percent of their national income on government. In the Caribbean the figure is 37 percent. In the lower-middle-income country group, to which most of the Caribbean countries belong, governments on average consume roughly a quarter of their national income. The average size of the public sector in the Caribbean, however, has declined over the past decade. If we exclude the two outlier countries -- the Dominican Republic and Guyana -- in the Caribbean sample, the average ratio of government spending in GDP has come down from 36.5 percent in 1981-85, to 34 in 1986-90 and to around 31 percent in 1991-95. The size of the government in the Dominican Republic is relatively small and in Guyana it is unusually large. Moreover, while other big governments in the region have generally cut down their size over time, Suriname continues to have a relatively big government.

These data, however, cover only central government spending and therefore, do not give the picture of consolidated operations of the public sector. This could sometimes distort the statistical portrayal of the resource allocation. For example, in Barbados the central government represents close to 90 percent of the consolidated public sector expenditure accounts but in Trinidad and Tobago the rest of the public sector (i.e., public utilities, state-owned corporations and statutory bodies) spends as much as the central government. This limitation in the comprehensiveness of the data could affect the interpretation of results and therefore, it is important to check the individual experiences of the countries.

In OECS countries, the public sector on average has been consuming roughly 35 percent of the national income of which approximately 2 percent has been going towards non-discretionary debt-service. Governments in these small island economies have been the employer of last resort, with 40 to 60 percent of the workforce working for the public sector (Ferracho, 1994). On average, the wage-bill has fluctuated around 55 percent of current expenditure net of interest payments since early 1980s, with ranges from 45 percent in St. Kitts-Nevis to nearly 62 percent in Dominica. There is a widespread over-staffing at lower-ranks in the public sector. This has resulted in underemployment and low productivity while inadequate wages at technical and managerial levels have led to unfilled vacancies.

In Jamaica, government spending as a share of GDP has remained in the range of 35 to 40 percent over the past decade. Of this nearly one-third has been spent for interest on debts; while most of the debt is owed to foreign lenders, a big chunk of the debt service has been paid on domestic debt on which the interest rate is much higher. Currently, the central government employs roughly 8 percent (excluding the employees at public enterprises and utilities, whose number is not accurately known) of the country's workforce down from 14 percent in the early 1980s. The composition of civil service is bottom-heavy. While the wage bill in 1994-95 accounts for over 50 percent of the government's discretionary current expenditure (i.e., net of interest payments), managerial, professional and technical staff are poorly paid with salaries typically half or less of the private equivalent. As a result, it has been difficult to attract many professionals into the civil service as indicated by a significant number of unfilled key positions.

In Trinidad and Tobago, the consolidated public sector including the public services, public utilities and state owned enterprises, is large and has been the chief beneficiary of oil income. Oil windfalls significantly increased the size of the public sector which became the country's largest employer. During the period 1986-90, the consolidated public sector controlled nearly two-thirds of the country's economic activity. At its peak in 1987, 30 percent of the total labor force was employed in the public sector and close to 15 percent of the GDP was devoted to wages and salaries. In the past several years, the government has taken steps to streamline and refocus the public sector to a smaller and more strategic role. In 1994 the size of the public sector spending has come down to 33 percent as a ratio to GDP. The government has also taken steps to divest and privatize a number of activities. Since 1988, public sector employment has begun to decline with its share in the total labor force hovering around 28 percent in the early 1990s, and declining further to 22 percent by 1994. The composition of the work force, however, continues to be bottom-heavy and the wage structure needs revision. While on average, public sector employees are paid close to 60 percent *more* than in the private sector, wage compression -- low ratios between the highest and lowest employee salaries -- is a major problem in the public sector. Compensation is almost double the prevailing market wages at lower levels in the public sector but at professional, technical and managerial ranks, compensation is as much as 50 to 70 percent lower than in the private sector which makes it difficult to attract and retained qualified staff.

Despite the progress made under its Economic Recovery Program initiated in 1988, Guyana -- the only CGCED economy besides Haiti that is classified as Low-income -- continues to have an exceptionally big and ubiquitous public sector. Not only the country has the biggest public sector in the region (see Table 1), it is also one of the largest in the world. One consequence of this large public sector -- larger than Guyanese could or would pay for -- has been the country's heavy debt service burden. In 1989 the country paid 31 percent of its GDP in debt service. While payments have declined in recent years due to debt write-offs and rescheduling, debt-service continues to take away nearly 15 percent of the national income. Recent efforts to control discretionary public expenditures have had some success. The share of total central government expenditures in GDP declined from 66 percent in 1989 to 38 percent in 1994 and the non-interest current expenditures declined by nearly 25 percent of the 1989 level. The public sector employment structure is similar to many other countries in the region; it is replete with manual and clerical workers but lacks enough professionals. Personnel emoluments decreased steadily during the late 1980s and the wage compression ratio deteriorated from 9:1 in 1987 to 6:1 in 1990. The impact of such wage policies has resulted in unfilled key vacancies at professional and technical levels. This has impeded effective delivery of services; the government has not been able to properly carry out basic functions such as management and analysis, accounting and cost control, sector planning and essential service delivery. In the past couple of years, however, the central government employment policies have moved in the right direction. During the period 1991-94, the decline in the number of redundant employees has been 19 percent of the 1990 level and the compression ratio has increased to nearly 11:1. Personnel emoluments in 1994 accounted for nearly 15 percent of central government spending (40 percent of non debt-service current expenditures), up from 11 percent (30 percent of non debt-service current expenditures) in 1989.

In sharp contrast to the experience of most countries in the region, Barbados has had a dedicated and competent civil service that has been instrumental in implementing prudent public policies over a quarter century since the country's independence in 1966. Total central government expenditure as a ratio to GDP fluctuated around 25 percent until the 1980s and since then has increased to nearly 29 percent. The Barbadian public sector employment policy, however, has been puzzling in two ways: First, there has been a significant increase in the public sector employment since 1966. Currently, the public sector employment is close to 20 percent of the total employment, up from 15 percent in the late 1960s. Second, the wage bill has been relatively high. The average in the 1990s has been over 50 percent of the non-debt service current expenditure. Moreover, wage increases in the public sector have been consistently aimed at compressing the dispersion of salary ranges on grounds of equity. A disincentive to retain skilled staff, this wage scale model has been closely followed in the private sector unionized wage negotiation process. Clearly for a country which has traditionally provided high quality public service, these developments are not encouraging and need to be carefully reviewed.

3. The role of public sector in education and health provision

Access to basic education and health services is crucial for the poor as it gives them a chance to enhance their future productivity and to benefit from expanding income-earning opportunities. What has been the Caribbean record for access to publicly-provided education and health services? What steps have the governments taken in this area critical to poverty reduction? How has the role of private sector evolved? This section explore these issues.

The pattern of resource allocation for education and health suggests that most Caribbean governments have attached great importance to the welfare of their citizens. The average public spending on health and education in the Caribbean is higher than the average for the non-Caribbean developing countries (see Table 2). It is, however, important to underscore two key caveats in this analysis of trends and comparison. First, a more detailed examination of expenditure allocation between basic and tertiary levels is required to make statements about the benefit incidence. For example, in almost all developing countries the probability of obtaining university education is higher for secondary school graduates from high- than low-income families. Numerous studies have shown that government subsidies for services at the tertiary level (university education and hospital-based curative care) disproportionately benefit families with relatively high incomes that could afford to pay a significant, if not all, cost of such services. Second, low or falling public spending on health and education may not be necessarily bad if the unit cost of service provision is low and/or if the private sector plays an active role in the provision of these services. In Jamaica, for example, public health expenditure as a share of GDP has stayed roughly the same over the last 15 years but the total health expenditure -- public and private -- has increased from 5 percent of GDP in 1980 to nearly 9 percent in 1993-94, with the private sector providing all the increase. In 1990, the share of the private sector in total health expenditure in the Caribbean countries ranged from a low of 29 percent in Trinidad & Tobago to a high of 53 percent in Suriname and St. Lucia (PAHO, 1994).

Most indicators of education and health place the majority of Caribbean countries well above the average for all countries at similar levels of income (see Table 3.1 and Table 3.2). While there is variation in the experience of individual countries and much remains to be done, the overall regional picture is indicative of a sustained progress in human resource development. Governments have been the principal provider of primary and secondary education and private sector involvement has been typically a joint undertaking with government. In the majority of Caribbean countries primary schooling is nearly universal, enrollment ratios for secondary education are generally above the average for middle-income countries and overall literacy rates are high. The improved health outlook in the Caribbean can be seen in the increased share of deaths attributable to cardiovascular ailments (which typically affect adults) and the declining incidence of infectious diseases. The leader in the Caribbean is Barbados where economic growth has been accompanied by a steady advance of all social indicators. It is generally agreed that one of the strengths of the Barbadian economy has been the high average level of educational attainment. Education at primary and secondary levels, provided free by the government, has been universal since 1985; education attainment among women is high, and Barbadians' literacy is the highest of any developing country. According to the UNDP (1994), human development -- measured by combining indicators of life expectancy, educational attainment and income -- in Barbados was ranked first among all developing countries. In the last 15 years, education spending has been the single largest category in the government budget. With nearly 60 percent for primary and secondary levels, public spending on education has consistently accounted for over 7 percent of GDP. Expenditure on health, with significant outlays on disease control, accounts for the second largest category of government spending. The government has been spending nearly 5 percent of its national income on health and all Barbadians have access to a publicly provided universal health care system. According to PAHO (1994), while the average per capita public health spending in 1990 for the Latin America and the Caribbean region was US$15 (measured in 1988 US$), in Barbados it was US$225, and only part of this differential is due to differences in the costs of provision. It is likely that due to this emphasis on medical services, the current health indicators and vital statistics in Barbados are among the highest in Latin America and the Caribbean.

While human resource development continues to merit high priority throughout the region, there remains a string of problems: Inequities remain in the public provision of education and health with benefits to the non-poor accounting for the lion's share of public resources; inadequate coordination exists between public and private provision; the quality of education is often not good, particularly in rural areas; and the public health care is generally not cost-effective. Moreover, extremely low (by regional standards) public spending on education and health in general and poor targeting of intended beneficiaries in particular, has put the Dominican Republic in a different league; the proportion of the population classified as poor has increased over the last decade (from 18.3 % in 1986 to 24.5% in 1989).[5]

A fundamental principle in the public provision of social services is that all income groups should have equal access to the same quantity and quality of services. Notwithstanding some

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[5]Higher economic growth and declining inflation in the 1990s have, however, helped the poor and the proportion of the population classified as poor in 1992 came down to 20.6%.

progress on this front,[6] public provision of education and health remains largely inequitable in the region.[7] For example, in Guyana, after a sharp decline in 1990-91, the shares of education and health have increased, reflecting the government's policy of giving higher priority to social sectors. Interpretation of this evidence, however, requires caution. An examination of intra-sectoral allocation in the health sector reveals that nearly one-third of total public expenditure during 1992-94 was for a major rehabilitation work on the Georgetown Hospital in the capital city. Similarly, subsidies to secondary and tertiary level students are substantially higher than those to primary school students. Based on student enrollments and education spending in 1991, the opportunity cost of one higher education student was 33 primary school students. This subsidy mechanism favors higher and vocational education which have lower social rates of return than returns on primary education (see Psacharopoulos, 1993 and 1981). In Belize where most health services are publicly provided (as much as 5% of GDP in recent years), access is grossly inadequate for the poor who live in rural areas. Nearly three quarters of the public health resources are absorbed by the hospitals, cost recovery is insignificant, and the beneficiaries are the better-off population. The Government of Barbados pays for any Barbadian attending the University of West Indies.

Despite the best intentions of governments to universally provide basic levels of education,

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[6]As noted earlier, Barbados spends nearly 60 percent of its education budget on primary and secondary education; among the OECS countries, Dominica, St. Lucia and St. Kitts-Nevis spend two-third or more of their education budget on primary education; emphasized as its first priority, Belize spends over 50 percent of the education budget on primary education.

[7]For example, the share of funds allocated to tertiary education in East Asian countries has tended to be low, averaging roughly 15 percent during the past three decades (World Bank, 1993). In the Caribbean, the share has been roughly 30 percent. However, when compared with countries such as Brazil and Venezuela, the Caribbean provision looks equitable. In Brazil, the estimated cost per student at the university level is 25 times higher than at the primary level and students pay no tuition at public universities; the country allocates 70 percent of its public spending on health to hospitals. In Venezuela, spending on universities -- which is nearly three-quarters of all public education spending -- shortchanges the basic education system.

the public schooling system in many Caribbean countries favors the non-poor. For example, in Jamaica, while everyone has equal access to publicly provided primary education, the better quality publicly funded secondary education is provided in traditional high schools which enroll students passing the Caribbean Common Entrance Examination (CEE).[8] Many middle and upper income families send their children to private pre-primary and primary schools in order to improve their chances of getting into the traditional high schools. As most of the poor do not have resources for private primary schools, their children are relatively less prepared to take the examination. Upon failing the CEE, their choice is limited to the lesser quality all age and new secondary schools which receive the least public funding. This feature of the public schooling system introduces inequity into the system and limits the future income potential of the poor. An almost similar system exists in Trinidad and Tobago where admission to the publicly financed, better quality traditional 7- and 5-year schools is based on achieving high scores in the CEE. Those who score low in the exam attend the lesser quality junior secondary schools. Similar to the Jamaican case, very few students attending government or government-assisted primary schools make it to these traditional schools which offer a strong academic curriculum. The bulk of the enrollment consists of students attending private primary schools. A similar schooling system exists in Belize where opportunities for secondary education are limited to only 60 percent of primary school graduates.

The key to better human resource development lies not just in quantitative expansion of education but more importantly in the quality of service. For example, Berhman and Birdsall (1983) have shown that the private return to education drops by nearly one-half when education attainment

[8]The Caribbean Common Entrance Examination is administered at the end of the primary cycle in all English-speaking Caribbean countries except St. Kitts-Nevis.

is adjusted for quality. In a recent study Hanushek, Gomes-Neto, and Harbison (1994) have shown that if $1 is invested in useful resources such as textbooks, an immediate savings of more than $12 is obtained from speeding students through school. While the quantitative ratios in education -- e.g., enrollment at the primary and secondary levels -- achieved in the Caribbean are impressive, stories of poor quality instruction particularly in rural areas, deficiencies in curricula and lack of proper instruction materials are widespread. In Belize, the Dominican Republic, and the OECS countries learning is hampered by the large proportion of teachers who are untrained or inadequately trained, and the paucity of teaching materials, particularly textbooks. Moreover, in Guyana and the Dominican Republic, while primary enrollment rates have been maintained at very high level, the poor quality of education has led to low examination scores, low attendance rates and high dropout rates. This in turn leads to a significant waste of resources in the school system. A key challenge for the Caribbean countries is to improve the quality of education, particularly at the primary level.

There is no unique prescription for allocating the education budget, but putting nearly all resources for teacher salaries is clearly not one of the better allocations.[9] Yet in Belize, Dominica, Jamaica, St. Kitts-Nevis and St. Vincent and the Grenadines, among others, the bulk of the recurrent budget is allocated for wages and salaries and very little goes for maintenance of facilities and supply items. For example in Jamaica, salaries and other allowances account for nearly 95 percent of the government's recurrent education budget for primary level. The impact of such an intra-sectoral allocation is that education facilities are in poor physical shape, equipment is lacking, and teaching aids are virtually non-existent in most public schools. Although enrollment rates are nearly universal,

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[9]Hanushek (1995) has argued that the evidence on teacher salaries in developing countries contains no compelling support for the notion that higher wages yield better teachers. In fact it has been shown that perhaps the single most important effect of resources on education in developing countries is teacher's education.

about half of students finishing 6th grade have test results indicating functional illiteracy. In St. Vincent and the Grenadines, wages and other emoluments of teachers and other staff account for nearly 95 percent of primary and secondary education expenditures in recent years and a puny two percent for material and supplies.

In some countries public health services are not cost-effective due to improper allocation of resources within the sector. Take the example of Trinidad and Tobago where the government spends a fair amount of resources on health services which are delivered free to all individuals. Despite years of emphasis on primary care, resources have been increasingly allocated to the hospital sector -- the ratio of expenditure on hospitals to primary care has risen from 5:1 to 10:1 over the 1980s. This pattern of resource allocation has severely deteriorated the quality of basic health care services. This in turn leads to a string of unnecessary and costly self referrals to hospitals which raises the cost of health services. Likewise in the Dominican Republic, the skewed distribution of public health outlays toward hospitals reinforces a cultural preference for hospital-based curative care services. With inadequate resources devoted for basic services, a majority of health centers and clinics have supply shortages and staffing deficiencies. This often results in patients bypassing lower level facilities which in turn increases the unit cost of service delivery. A similar story emerges in Guyana where large regional differences in health indicators in part reflect the breakdown of the referral system and the growing emphasis on curative health care rather than on primary and preventive care. While this pattern of health spending allocation is more the rule, there are a few exceptions in the region. In Dominica, it is well recognized that primary care is one of the most cost effective approaches to health care delivery. More importantly, this belief has been implemented through an effective action program. Provision of preventive (e.g., immunization) and promotive care (basic health education) through health centers has significantly improved indicators. Immunization of children against polio, diphtheria, tetanus and measles reached 100 percent by 1993.

4. The state of infrastructure: Past achievements and future opportunities

While the size, the efficiency of provision, and the appropriate public-private balance remain major issues of contention, there is a consensus that the role of infrastructure in growth is crucial (see Aschauer, 1989, Barro, 1991, and Devarajan, Swaroop and Zou, 1996). The importance of infrastructure to development can be illustrated by a simple example: Annual economic costs of not having adequate transport infrastructure in China during the past several years have been conservatively estimated around 1 percent of China's GNP (World Bank, 1994a). In recent years, however, the dominant public sector role in infrastructure and the need to privatize certain services for better operations in developing countries have been debated extensively. Governments in developing countries own, operate, and finance nearly all infrastructure; the Caribbean region is no exception to this finding. While water and sewerage, roads and railways were always under government control, other services such as electric power, telecommunications and urban transportation system were acquired by many Caribbean governments in the post-colonial period (Nicholls, 1995). Notwithstanding the technological advancements in infrastructure that have created conditions for competition and hence an increasing role of the private sector,[10] the bulk of the service provision continues to be in the public domain in a majority of the Caribbean countries.

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[10]For example, some form of competition can now be introduced for power generation as development of steam-driven turbines and combined-cycle technologies have reduced the scale economies in electricity generation. Some developing countries are now encouraging the private sector to construct and operate power plants through "Build, Operate and Transfer (BOT)" or "Build, Own and Operate (BOO)" schemes.

Does the smallness of a country justify a big role of the public sector in the provision of infrastructure services? It is true that small economies face many problems due to their size.[11] For example, in small economies the unit cost of producing goods and services is relatively high due to their inability to exploit economies of scale in production, particularly in infrastructure.[12] The smaller the country, the more pronounced the cost disadvantage. If such factors lead to market imperfections, and conditions for competition cannot be created then economic theory provides a rationale for public provision (or regulation in case of private provision) of goods and services. But whether or not such small economy characteristics actually lead to market imperfections is an empirical matter. In the Caribbean, particularly in the OECS countries, it is not clear whether the public provision of infrastructure services is due to market imperfections (e.g., non-viable domestic or foreign private sector) or for other reasons. Even in cases where there is a need for a single supplier (e.g., in some infrastructure services), the public sector may not be the most efficient provider as long as there are viable private providers; a regulated private monopoly could be a better alternative. The recent experience of a few Caribbean countries (Jamaica, for example) suggests that it is possible to achieve a balance of public and private provision of infrastructure services. In the past, Barbados, a small country with a population of 260,000, has also been able to develop successful legal and regulatory policies to attract private sector in the provision of such services.

With the exception of Barbados, the state of infrastructure in the Caribbean could be classified as poor. For political economy reasons the regulatory system has generally failed to counter supply

[11]See Srinivasan (1985) for a lucid treatment of this issue.

[12]For example, it has been estimated that small countries experience an average of 65 percent cost disadvantage in creating additional thermal capacity for power generation (Legarda, 1983).

inefficiencies: Over-staffing in public utilities and poor maintenance of infrastructure facilities contribute to the high cost of provision. Factors that reduce potential output -- poorly maintained roads, power brown- and black-outs, inadequate water supply, high number of faults per telephone line, etc. -- are common in the region. The delivery of service is also hampered due to inadequate tariffs. Low user charges, infrequent adjustment for inflation and poor enforcement often lead to major revenue shortfalls. In several Caribbean countries (e.g., the Dominican Republic and Guyana), public utility deficits are often a major source of general fiscal budget deficits. Developing countries' experience suggests that public enterprises such as highway authorities, electricity, telecommunications and water systems should be required to cover a major portion, if not full, of their costs (see Swaroop, 1994). In the Caribbean, as is the case in most developing countries, full cost recovery for infrastructure services is more the exception than the rule due to inefficient service provision (i.e., high cost of production) and inadequate tariff adjustments.

During a fiscal adjustment in developing countries public infrastructure spending often takes the biggest reduction, and cutbacks in nonwage operations and maintenance (O&M) are closely followed (World Bank, 1992). While the initial decline in investment can be justified, a continuous reduction and the concomitant cutback in nonwage O&M, especially without an active private sector participation, is very likely to be an impediment to the revival of growth. The experience of Trinidad and Tobago shows that the cost of fiscal adjustment -- partly caused by declining oil revenues -- has been disproportionately borne by infrastructure spending. Public capital spending which averaged around 15 percent of GDP during the oil boom in early 1980s, has barely averaged 2 percent of a much smaller GDP since 1988. No new investment, lack of maintenance, financially unsustainable tariffs and poor management have contributed to a severe erosion of the country's infrastructure.

Road conditions are bad, serious problems exist in the sewerage system and the water supply is leaky, with unaccounted for water running over 50 percent. The country needs to improve its infrastructure by increasing public sector investment and encouraging private sector participation to sustain the recent growth revival.

To secure satisfactory return on infrastructure capital, an effective operations and maintenance strategy is necessary. Perhaps the best example of this comes from the road sector. Though the benefits of road maintenance are often not clearly visible in the short-run, lack of it could easily increase the cost exponentially. Lack of routine maintenance of roads increases the pressure on periodic maintenance, and if the latter is neglected too it leads to much higher rehabilitation cost, which at times could be as high as that of new construction. The Jamaican experience starkly illustrates this. The country has had an extensive road network for decades but less than one-fifth of paved roads are in good condition. Much of the system has deteriorated in the last 20 years, some irreparably, due to lack of proper maintenance. As a result of past under-funding of road maintenance, nearly 50 percent of the Ministry of Construction budget goes for road rehabilitation. It has been estimated that the cost of restoring Jamaica's road network to maintainable standard is over 6 percent of the country's GDP. Among other Caribbean countries, in St. Kitts, despite lack of reliable data it is clear that road maintenance in the past has been grossly inadequate. A recently financed sizeable capital investment project in the road network is testimony of the low priority attached to maintenance in previous years. Similarly in Grenada the frequency of major rehabilitation and reconstruction of roads suggests that road maintenance in the past years has been inadequate.

How weak management, inefficient operation and low tariffs can lead to a near collapse of an infrastructure facility is exemplified by the Guyana Electricity Company (GEC). A single publicly-owned utility, GEC, provides almost all electricity in Guyana. The existing generation, transmission and distribution facilities of the power utility have been worn out, supply has been unreliable, and the limited capacity does not meet demand. The utility has been a major burden on the public treasury with transfers amounting to nearly 3.5 percent of GDP in 1992. One of the main reasons for dependence on the treasury has been low tariffs. While the government has taken steps to revise and review electricity tariffs to improve the financial viability of GEC and is looking for "Build, Own, Operate and Transfer (BOOT)" arrangements for additional power generation, a sustained improvement of the utility will require the government to implement its commitment to bring in private management on a commercial basis. A similar case of inefficient operation and management can be seen in the Dominican Republic, where the performance of *Corporacion Dominicana de Electricidad* (CDE) -- a state monopoly in power generation, transmission and distribution until 1989 -- has been sub-par. With a long history of institutional and financial weaknesses, CDE has been draining precious government resources. In the early 1990s, the actual power production at times was restricted to 30 percent of the installed capacity due to poor maintenance, precarious operating conditions and high level of technical losses. The recently proposed reform toward privatization in the power sector is a step in the direction of attracting private capital and management. If implemented, the private sector would handle distribution, manage transmission and exclusively undertake all new generation capacity. This would relieve scarce public resources from the power sector that could be used for the much needed spending in education and health (see section 3).

Countries like Barbados give credence to the oft-made argument by development analysts that an adequate, well-maintained and efficient infrastructure has a high potential payoff in terms of economic growth. Infrastructure development has been a major focus of public policy in Barbados.

A well-thought overall development has provided critical support to the growth of the economy. Relative to other Caribbean countries, public and private provision of infrastructure services in Barbados has been much more balanced (Nicholls, 1995). The average share of infrastructure in public capital outlays has been about 20 percent and about 10 percent in recurrent expenditure. Initially, the thrust of the investment program was on roads, but with the expansion of tourism, emphasis shifted to the expansion of airport runways and a new passenger terminal, and on improvement of port facilities. Telecommunication (including connections to computer databases) links between Barbados and the rest of the world are excellent. Informatics, banking, insurance and other service export sectors depend on a high quality infrastructure and have been a major source of Barbadian growth. With a firm government commitment to continuously expand and improve, Barbados has one of the best infrastructure in the Caribbean.

5. Lessons from Experience and Looking Ahead

Governments in the Caribbean realize that inefficient operations of the public sector cannot be sustained and participation of the private sector in the provision of social and infrastructure services is much needed. There is also realization that the role of the public sector in the future needs to be much narrowly focused. Actions have been taken and/or are being taken in almost all the countries though the average pace continues to be slow. In terms of measuring the performance of governments in achieving the goals of poverty reduction and creation of the enabling environment for growth, Caribbean countries can be broadly classified as follows: Barbados and the Bahamas have been the leaders; the Dominican Republic and Guyana are the laggards; and the rest are in-between. Based on the evidence presented above, the following policy recommendations can be made towards public sector reform in the Caribbean:

- The need for public sector intervention in Caribbean economies due to market imperfections such as non-viable domestic or foreign private sector has to be demonstrated and should not be taken as given. Evidence from other developing countries suggests that the alleged problems of small economies can be addressed through suitable policy measures.
- In reducing the size of the public sector, Caribbean countries need to shed the "employer-of-last-resort-image." Over-staffing at lower-levels and inadequate compensation at the professional level are the two main problems that need to be addressed on a priority basis.
- All in all, a strong case can be made based on the Caribbean evidence -- although anecdotal -- that the public sector financing should focus on basic levels of education and health services where returns to society are likely to be higher. Public provision (and regulation of private provision) should aim to improve the quality of basic service, while sustaining or expanding the existing coverage as appropriate. The public sector is now the predominant provider of the tertiary service which primarily benefits the non-poor. Attempts must be made to recover costs from high-income users by appropriately designed user charges.
- The Barbadian experience suggests that the efficient provision of infrastructure can enhance private sector led economic growth. A balanced public-private infrastructure provision based on commercial principles is most desirable; the public-private mix could vary from country to country. Lessons from experience suggest that in most Caribbean countries increased private sector participation in infrastructure provision and better regulatory framework are required. The good news is that it is already taking place in many countries.

Table 1
Total central government expenditure as a share of GDP, 1981-95
(percent)

Countries	*1981-85*	*1986-90*	*1991-95*
Bahamas, The	22.4	20.4	20.5
Barbados	29.4	30.6	29.5
Belize	32.8	32.4	32.7
Dominican Republic, The	14.6	15.3	17.9
Eastern Caribbean States[1]	44.5	34.6	29.9
Guyana	86.0	80.1	72.2
Jamaica	39.6	39.5	33.2
Suriname	44.3	48.7	47.0
Trinidad & Tobago	42.4	35.2	29.4
Lower-middle-income countries[2]	30.2	26.7	24.9
Upper-middle-income countries[3]	36.1	37.0	24.4
OECD countries[4]	39.9	40.1	43.0

Notes: (i) [1]The Eastern Caribbean States sample includes Antigua and Barbuda, Dominica, Grenada, St. Kitts-Nevis, St. Lucia and St. Vincent; (ii) [2]The Lower-middle-income country sample has 18 countries -- Bolivia, Chile, Cameroon, Colombia, Ecuador, Egypt, Jordan, Morocco, Panama, Papua New Guinea, Peru, The Philippines, Paraguay, Turkey, Senegal, Syria, Thailand, and Tunisia; (iii) [3]The Upper-middle-income country sample includes two countries -- South Korea and Uruguay. (iv) [4]Except Canada, Germany, Greece, Japan, Mexico, Turkey and the United States; (v) All Caribbean countries in the above table belong to the group of Lower-middle-income countries excepting The Bahamas, Barbados and Guyana which belong to the High-income and Upper-middle-income and Low-income countries, respectively, as classified by the World Bank (1995); (vi) In the comparator country samples, countries having a federated structure of government were left out since all the Caribbean countries have a unitary government structure.

Source: Author's calculation (raw data are from the Government Financial Statistics, International Monetary Fund).

Table 2
Central government expenditure on education and health as a share of GDP, 1981-95
(percent)

Countries	*1981-85*	*1986-90*	*1991-95*
Bahamas, The	3.2 [2.8]	n.a [n.a]	n.a [n.a]
Barbados	6.6 [4.5]	7.6 [5.0]	8.3 [5.2]
Belize	4.8 [2.5]	5.6 [1.9]	5.7 [2.7]
Dominican Republic, The	2.2 [1.6]	1.8 [1.3]	1.3 [1.5]
OECS[1]	n.a [n.a]	4.7 [3.5]	4.3 [3.3]
Guyana	6.7 [4.1]	4.3 [3.1]	3.2 [2.4]
Jamaica	6.5 [2.8]	4.8 [2.6]	4.5 [2.8]
Suriname	7.1 [1.7]	8.1 [2.5]	n.a [n.a]
Trinidad & Tobago	3.5 [1.8]	4.1 [2.6]	4.2 [2.5]
Lower-middle-income	4.1 [1.8]	3.8 [1.8]	3.5 [1.8]
Upper-middle-income	2.6 [1.8]	2.5 [1.8]	2.5 [1.8]
OECD	3.2 [3.6]	3.2 [3.7]	3.2 [3.8]

Notes: (I) [1]The numbers for the OECS countries in the table are averages of Dominica, Grenada, St. Kitts-Nevis and St. Vincent. See Table 1 for other definitions; (ii) Health numbers are in brackets; (iii) n.a indicates 'not available.'

Source: Author's calculation (raw data are from the Government Financial Statistics, International Monetary Fund, and country financial and statistical bureaus).

Table 3.1
Social indicators in the Caribbean
(Most recent estimate available between 1987 and 1992)

Countries	*School Enrollment*		*Health Status*
	Gross Primary (% of school age pop.)	Gross Secondary (% of school age pop.)	Infant Mortality (Per thou. live births)
Antigua & Barbuda	n.a.	n.a.	20.0
Bahamas, The	99	93	25.0
Barbados	106	87	10.0
Belize	90	54	41.0
Dominican Republic, The	95	51	41.0
Eastern Caribbean States	n.a	n.a	23.1
Grenada	n.a.	n.a.	28.0
Guyana	112	57	48.0
Jamaica	106	62	14.0
St. Vincent	n.a.	n.a.	20.1
St. Kitts & Nevis	98.0.	n.a.	34.0
St. Lucia	n.a.	n.a.	18.5
Suriname	127	54	36.5
Trinidad & Tobago	96	81	15.0
Latin America & Caribbean	106	47	44.0
Lower-middle-income	107	n.a	40.0
Upper-middle-income	107	53	40.0
OECD	103	92	7.0

Notes: (i) See Table 1 for definitions; (ii) n.a indicates 'not available.'

Source: World Bank (1994 b).

Table 3.2
Social indicators in the Caribbean (contd.)
(1992)

Countries	*Education attainment*[1]	*Life expectancy at birth* (Years)	*World-wide rank*[2]
Antigua and Barbuda	2.23	74.0	55
Bahamas, The	2.39	71.9	36
Barbados	2.61	75.3	20
Belize	2.23	68.0	88
Dominica	2.25	72.0	64
Dominican Republic, The	1.97	67.0	96
Grenada	2.27	70.0	78
Guyana	2.28	64.6	107
Jamaica	2.32	73.3	65
St. Vincent	2.27	71.0	69
St. Kitts-Nevis	2.38	70.0	70
St. Lucia	2.12	72.0	77
Suriname	2.19	69.9	85
Trinidad & Tobago	2.48	70.9	35

Notes: (I) [1]Defined as = (2[Adult literacy] + [Mean years of schooling/15]) / 3; (ii) [2]This ranking of a total of 173 countries is based on 'human development index' which is based on adjusted real GDP per capita along with the other two indicators presented in the table.

Source: UNDP (1994).

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